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THE NAS PARALLEL BENCHMARKS

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Abstract:

A new set of benchmarks has been developed for the performance evaluation of highly parallel supercomputers. These benchmarks consist of five ``parallel kernel'' benchmarks and three ``simulated application'' benchmarks. Together they mimic the computation and data movement characteristics of large scale computational fluid dynamics applications.

The principal distinguishing feature of these benchmarks is their ``pencil and paper'' specification - all details of these benchmarks are specified only algorithmically. In this way many of the difficulties associated with conventional benchmarking approaches on highly parallel systems are avoided.

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